

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
14 July 2005 (14.07.2005)

PCT

(10) International Publication Number  
**WO 2005/063729 A1**

(51) International Patent Classification<sup>7</sup>: **C07D 309/12**,  
C07C 69/734, 59/68, 59/72, C07D 277/24, 213/30, C07C  
217/20, 233/11, C07D 295/18, C07C 323/12, 317/18,  
C07D 335/02, C07C 205/35, C07D 207/26, C07C 233/18

(74) Agent: **TAKASHIMA, Hajime**; Meiji Yasuda Seimei Os-  
aka Midosuji Bldg., 1-1, Fushimimachi 4-chome, Chuo-ku,  
Osaka-shi, Osaka, 5410044 (JP).

(21) International Application Number:  
PCT/JP2004/019741

(22) International Filing Date:  
24 December 2004 (24.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
2003-431629 25 December 2003 (25.12.2003) JP  
2004-241484 20 August 2004 (20.08.2004) JP

(71) Applicant (for all designated States except US): **TAKEDA  
PHARMACEUTICAL COMPANY LIMITED** [JP/JP];  
1-1, Doshomachi 4-chome, Chuo-ku, Osaka-shi, Osaka,  
5410045 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **YASUMA, Tsuneo**  
[JP/JP]; 20-5, Takada-cho, Ibaraki-shi, Osaka, 5670011  
(JP). **KITAMURA, Shuji** [JP/JP]; 3-8-1501, Komiya-cho,  
Tennoji-ku, Osaka-shi, Osaka, 5430036 (JP). **NEGORO,  
Nobuyuki** [JP/JP]; 4-4-35, Hyakurakusou, Mino-shi,  
Osaka, 5620042 (JP).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

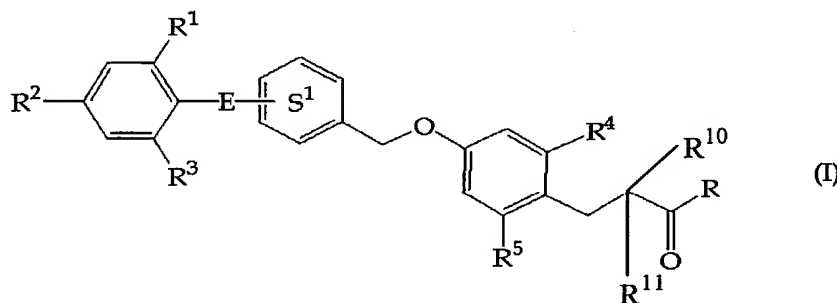
(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,  
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: 3-(4-BENZYLOXYPHENYL)PROPANOIC ACID DERIVATIVES



(57) Abstract: The present invention provides a novel compound represented by the formula (I) wherein each symbol is as defined in the specification, a salt thereof and a prodrug thereof having a superior GPR40 receptor function modulating action, which can be used as an insulin secretagogue, an agent for the prophylaxis or treatment of diabetes and the like. They unexpectedly show superior GPR40 receptor agonist activity, and also show superior properties as a pharmaceutical product, such as stability and the like. Thus, they can be safe and useful pharmaceutical agents for the prophylaxis or treatment of GPR40 receptor related diseases in mammals.